

**AN APPARATUS AND METHOD FOR ACCOMMODATIVE STIMULATION OF AN  
EYE AND SIMULTANEOUS IPSILATERAL ACCOMMODATIVE IMAGING**

**Abstract of the Invention**

An apparatus comprising an accommodative stimulation device, an electromagnetic wave  
5 exposure device, and an imaging device. The apparatus acquires imaging information about an  
eye by means of the electromagnetic wave exposure device and the imaging device as the  
apparatus simultaneously stimulates the eye to undergo at least one reversible accommodative  
transition from any first state of accommodation to any second state of accommodation by means  
of the accommodative stimulation device. The accommodative stimulation device has an axis of  
10 projection that is substantially perpendicular to a visual axis of the eye, along which axis of  
projection an adjustable accommodative target is projected through a system of Badal optics,  
having a Badal optical axis coincident with the axis of projection, to strike a half-silvered mirror  
lying in a plane that forms an angle of about 45 degrees with the axis of projection and the visual  
axis of the eye.